

REMARKS

Preliminary Amendment

Applicants have amended the claims to be limited to the elected invention and only the non-elected inventions wherein the restriction is traversed, as set forth in the discussion below. Applicants expressly reserve the right to pursue the subject matter of any non-elected inventions in a divisional application.

New Claims 213-226 have been added to more particularly describe aspects of the invention. The claims are fully supported by the specification and fall within the scope of the elected invention.

Restriction Requirement

The Examiner has divided the claims of the above-identified application into 58 groups as set forth on pages 2-5 of the Office Action. Applicants provisionally elect, with traverse as to the restriction among Groups I-XXX, to prosecute what is believed to be Group III (Claims 1-62 and 207-212), wherein the microorganisms are transformed with a polynucleotide encoding the polypeptides of SEQ ID NO:30 and SEQ ID NO:6. Claims 1-62 and Claims 207-212 read on the elected invention.

Applicants traverse the rejection with respect to Groups I-XXX. More specifically, first, Applicants submit that a thorough search for the subject matter of Claims 1-4 is sufficient to examine the subject matter of the non-elected inventions of Groups I-XXX, since these claims are not limited to a particular sequence. It is submitted that Claims 1-4 and similar claims in fact represent linking claims, as these claims are not limited to a particular recited sequence, to a particular combination of modifications, or to transformation of the microorganism.

Second, Applicants submit that since Claim 1 only requires a genetic modification that increases the activity of glucosamine-6-phosphate acetyltransferase, the Examiner's restriction on the basis of every possible combination of three sequences that represent glucosamine-6-phosphate acetyltransferases (*e.g.*, SEQ ID NOs:30, 32 and 34) with ten other sequences representing a different enzyme that appear in the dependent claims (and thus are not a required element of Claim 1) is unduly restrictive of the invention as claimed. It is submitted that a thorough search for Claim 1 with

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respect to the glucosamine-6-phosphate acetyltransferase modification should be sufficient to examine the dependent embodiments, which would minimally reduce the restriction to three groups instead of thirty.

Moreover, with respect to SEQ ID NOs:2, 6, 8, 10, 12 and 14, it is noted that these sequences are related as a wild-type glucosamine-6-phosphate synthase sequence from *E. coli* (SEQ ID NO:2) and variant sequences thereof (SEQ ID NOs:4, 6, 8, 10, 12 and 14), wherein the variants only differ from the wild-type sequence by a few substitutions. The variant sequences share a high identity with the wild-type sequence and all have glucosamine-6-phosphate synthase enzymatic activity. Therefore, it is submitted that a thorough search of the claims with respect to any one of these sequences, noting that the claims encompass variants, should be sufficient to examine all of these sequences. If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to distinct or independent inventions. The restriction requirements in this case only serve to substantially increase the prosecution expense to the Applicants and to the Patent and Trademark Office.

In view of the foregoing remarks, Applicants respectfully request that the Examiner withdraw the restriction requirements among Groups I-XXX or at a minimum, between the combination of any of SEQ ID NOs:30, 32 and 34 with other sequences..

Any questions regarding this response should be directed to the below-named agent at (303) 863-9700.

Respectfully submitted,

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